

IVAN GAPONENKO

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Education

Heriot-Watt University

Sep. 2022 – May 2026

BSc (Hons) Computer Science (Software Engineering). GPA: 3.5

Edinburgh, UK

Relevant Coursework

- Software Development 2
- Database Management Systems
- Data Structures and Algorithms
- Web Programming
- Software Engineering
- Programming Languages
- Artificial Intelligence
- Data Communications
- Hardware-Software Interface

Experience

Heriot-Watt University

September 2024 – Present

Computer Science Teaching Assistant

Edinburgh, UK

- Staff Member of an in-person Code Clinic helping students weekly with code-related issues.
- Assisting the professor in running weekly Software Development lab sessions as a demonstrator and a tutor.
- Peer mentor to a group of 12 students providing guidance with personal projects during weekly meetings.

Projects

Formula 1 Bingo Mobile App | Flutter, Dart, Firebase | Personal

June 2024

- Followed Dart framework splitting widgets, models, and screens.
- Utilized setState() for State Management.
- Built custom widgets for iOS UI.
- Implemented data storage using Firebase.

Megamind Board Game | C, ARM Assembly | Academic

April 2024

- Used RaspberryPi 3 to develop and run the program.
- Utilized LCD, LEDs and buttons as primary interface devices.
- Communicated with interface devices using ARM Assembler.
- Implemented game functionality in C with focus on memory management.
- Focused on exhaustive unit testing.

Offline Voice Processor | Python, PyTorch, Jupyter Notebook | Hackathon

March 2024

- Utilized Jupyter Notebook for visual analysis of audio files.
- Used wav2vec2 model to recognize firefighter's commands.
- Created own training data by augmenting existing data given by the user.
- Trained existing model on new data using PyTorch library.
- Created a python script to simulate real-life scenario.

Image Processor | C

February 2024

- Created custom image format interpreter per user requirements.
- Implemented image normalization.
- Manipulated image's RGB bitmap.
- Implemented image transformation from colour to monochrome.
- Focused on efficiency and low-level resource management.

Craigslist.com Redesign | JavaScript, HTML/CSS, Node.js, IndexedDB | Academic

May 2023

- Lead group of 5 developers with focus on Software Development Life Cycle.
- Designed UI prototype in Adobe XD.
- Developed responsive front-end using HTML and vanilla CSS.
- Used JavaScript for all action-related queries.
- Utilized Node.js packages to generate post entries to simulate user activity.
- Integrated CI/CD pipeline using Git.
- Stored post entries using IndexedDB.

Technical Skills

Languages: Java, JavaScript, HTML/CSS, Python, C++, C, OCaml, SQL, PHP, ARM Assembly, Bash, Dart

Database Systems: Firebase, MySQL, MariaDB, IndexedDB

Technologies/Frameworks: Node.js, Flutter, JUnit, PyTorch, Swing GUI, Jupyter Notebook, Git